



# LoadRunner Enterprise Troubleshooting tips.

Emmanuel Malavassi

Senior Technical Support Engineer

16/2/2022

# Objectives

- Transfer troubleshooting knowledge about Configuration process and implementation of Hosts, cover known issue for Graphs and Monitors
  - Identify types of deployments
  - Cover Prerequisites for Hosts Installation.
  - Sketch the Installation Process for a HOST.
  - Outline the importance of following prerequisites and requirements.
  - Recognize Known Issues during Test Runs.
  - Summarize Known Issues for Graphs and Monitors.

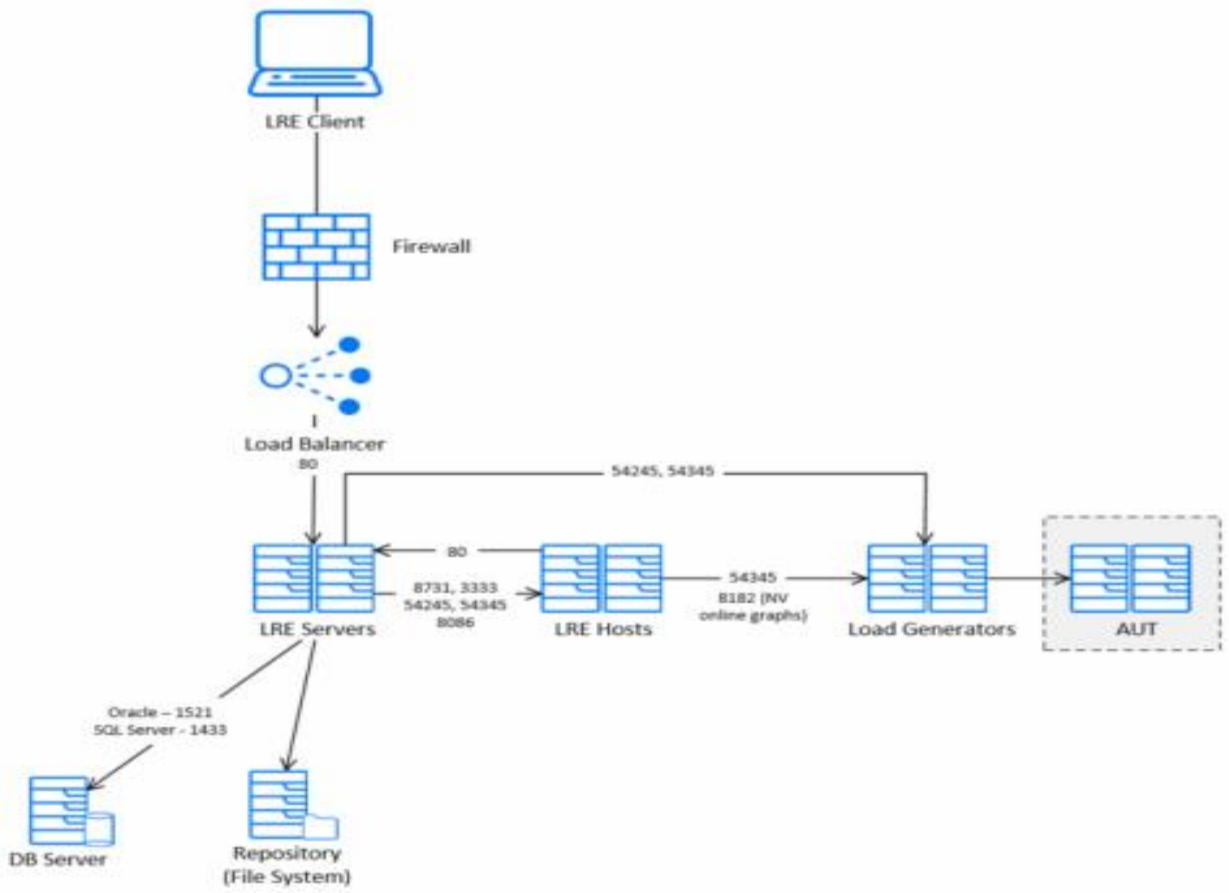
# Agenda

- Prerequisites and Considerations.
- Deployments
- Installation Process
  - LRE Service User Policies
  - LRE Service User
  - Config Wizard
  - Post configuration checks
- Relevant files
- Adding Hosts
- Known Issues starting Test Runs
- Known Issues Graphs and Monitors(InfluxDB)



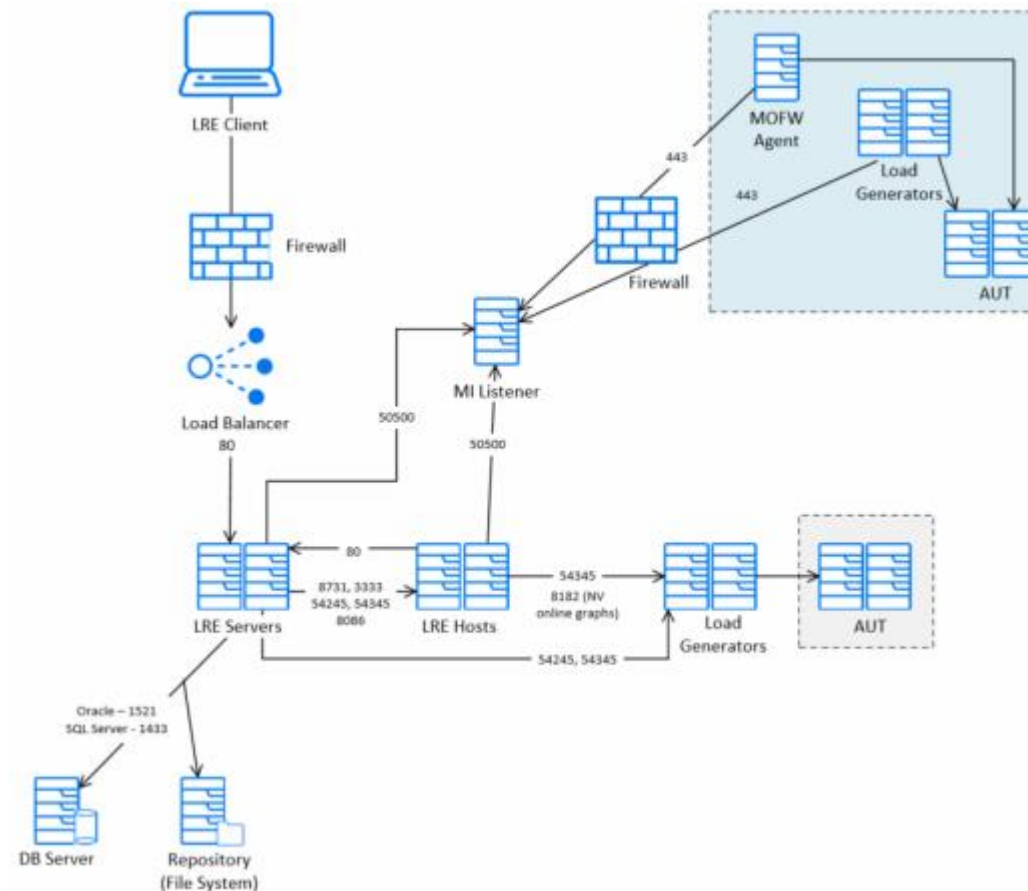
# Deployments

# Basic Deployment



# Over the Firewall Deployment

When testing applications that are located behind a firewall relative to the LoadRunner Enterprise server or host machine, you must configure an MI Listener, a load generator over a firewall, and possibly a monitor over a firewall.





# Pre-Installation Prerequisites and Considerations

# Check the Support Matrices and ensure that patches are up to date, and Read User Guide and Readme

- Ensure the Operating System Version, LoadRunner Version Combination is supported.
- Ensure you have the latest Operating System Service Pack or patch bundle for your respective version.
- Ensure prerequisites are met



# Prerequisite Software

- .NET Framework 4.8
- Microsoft Data Access Components (MDAC) 2.8 SP1 (or later)
- Microsoft Core XML Services (MSXML) 6.0
- Microsoft Visual C++ Redistributable for Visual Studio 2015 (for LRE 2021 and 2021 R1) and 2015-2019 x64 (for LRE 2021 R2)
- Microsoft Visual C++ Redistributable for Visual Studio 2015 x64 (for LRE 2021 and 2021 R1) and 2015-2019 x64 (for LRE 2021 R2)
- Windows Imaging Component (WIC)

# Prerequisite Considerations

- Disable UAC and DEP
- Disable FIPS
- Ports:

<b>LoadRunner Enterprise Host</b>	<p>HTTP (8731)</p> <p>TCP (3333, 54245, 54345)</p> <p>8182 for LoadRunner Enterprise hosts used as Load Generators to see online graphs for NV emulation information. If the port is closed, you can still see NV information in the offline results.</p> <p>8731 for LoadRunner Enterprise server to communicate with the Load Testing Operator service that orchestrates the test.</p> <p>8086 for LoadRunner Enterprise server/host to get online/offline analysis data. The port should be open for outgoing communication from the LoadRunner Enterprise server, and for incoming communication for the LoadRunner Enterprise host (for an internal database). For an external database, the port should be open for both incoming and outgoing communication from the LoadRunner Enterprise server and LoadRunner Enterprise host.</p> <p>54345 for LoadRunner Agent Service. Enables the Controller to connect to this host when it acts as a Load Generator.</p> <p>54245 for LoadRunner Remote Management Agent Service. Enables LoadRunner Enterprise server to perform lab maintenance operations on this host.</p> <p>3333 for LoadRunner Data Collection Agent. Enables LoadRunner Enterprise to control the machine routing table during test execution, based on the definitions set in Target IPs in the project settings. It also enables getting resource utilization metrics while a test is running.</p>
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# LRE Service User Policies

Policy Name	Reason
Create global object ( <b>SeCreateGlobalPrivilege</b> )	For Autolab running Vusers on the Controller.
Batch logon rights ( <b>SeBatchLogonRight</b> )	The minimum policies required to run Web applications.
Service logon rights ( <b>SeServiceLogonRight</b> )	The minimum policies required to run Web applications.
Access this computer from the network ( <b>SeNetworkLogonRight</b> )	The minimum policies required to run Web applications.
Log on locally ( <b>SeInteractiveLogonRight</b> )	Required by infra services. For example, after reboot, the system logs in with the LoadRunner Enterprise system user.
Impersonate a client after authentication ( <b>SeImpersonatePrivilege</b> )	Required for running LoadRunner Enterprise processes under the LoadRunner Enterprise system user.

# LRE Service User

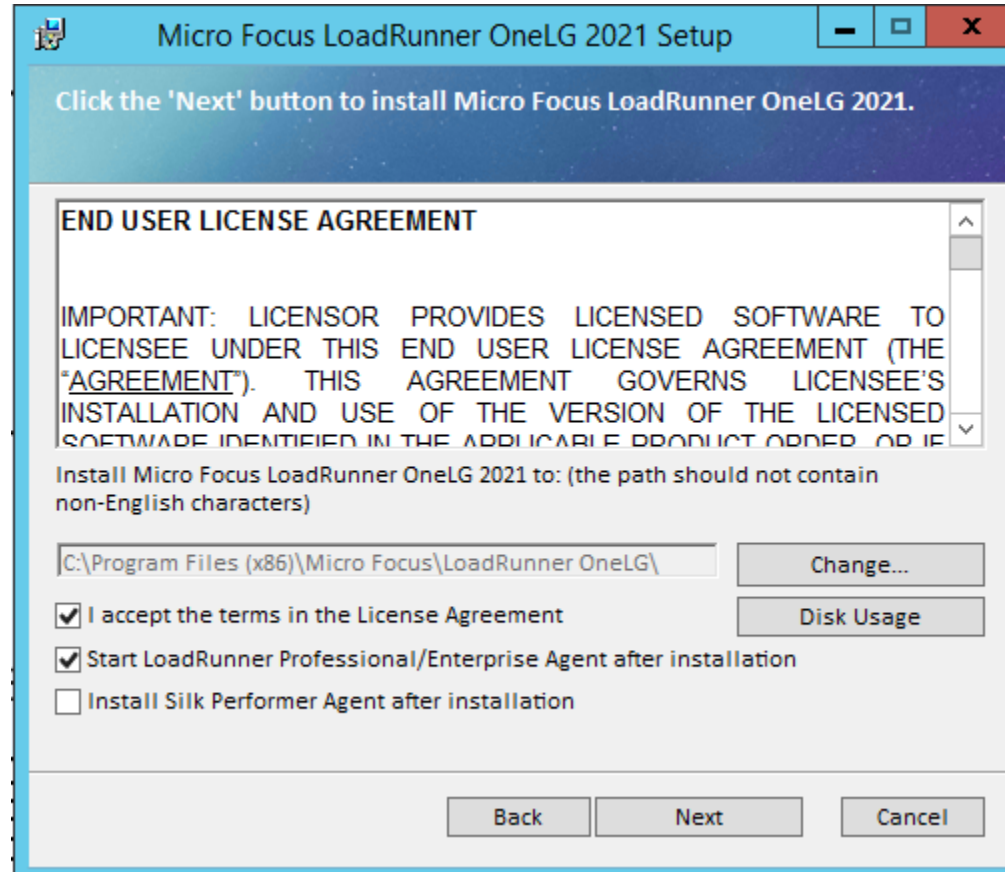
- For domain users and existing local users the password will be validated
- In case a domain user is specified but is not added in the 'Administrators' group the user will be allowed to continue with configuration, but it will fail in the 'Configuring Process' step
- In case of cluster configuration, the same domain user must be specified for all cluster nodes



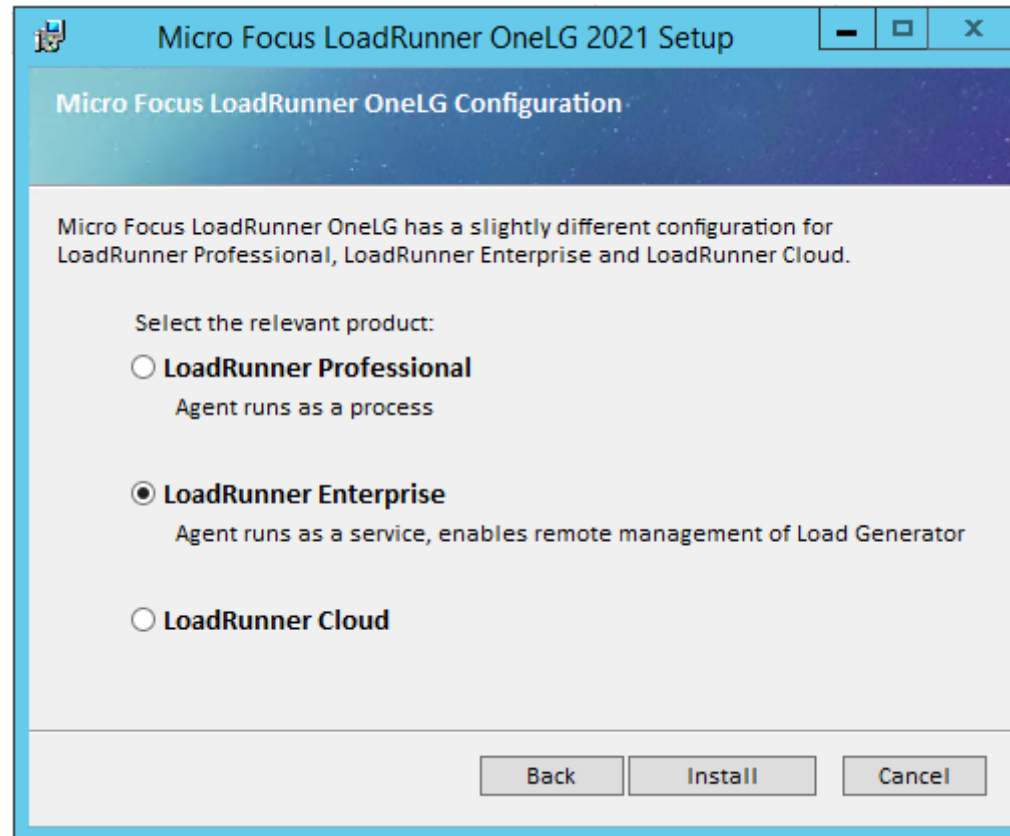
# Configuration Wizard



# Configuration Wizard



# Configuration Wizard





# Configuration Wizard

The screenshot shows a Windows-style window titled "Micro Focus LoadRunner OneLG 2021 Setup". The main content area is titled "Micro Focus Authentication Settings".

At the top, there is a checkbox labeled "Specify a certificate that will be used by the LoadRunner Agent." which is currently unchecked.

Below this, there is a section for "CA certificate file:" with an empty text box and a browse button ("...").

Underneath is a section for "SSL certificate" with two radio button options:

- Choose an existing certificate file: [empty text box] [browse button "..."]
- Generate a certificate automatically

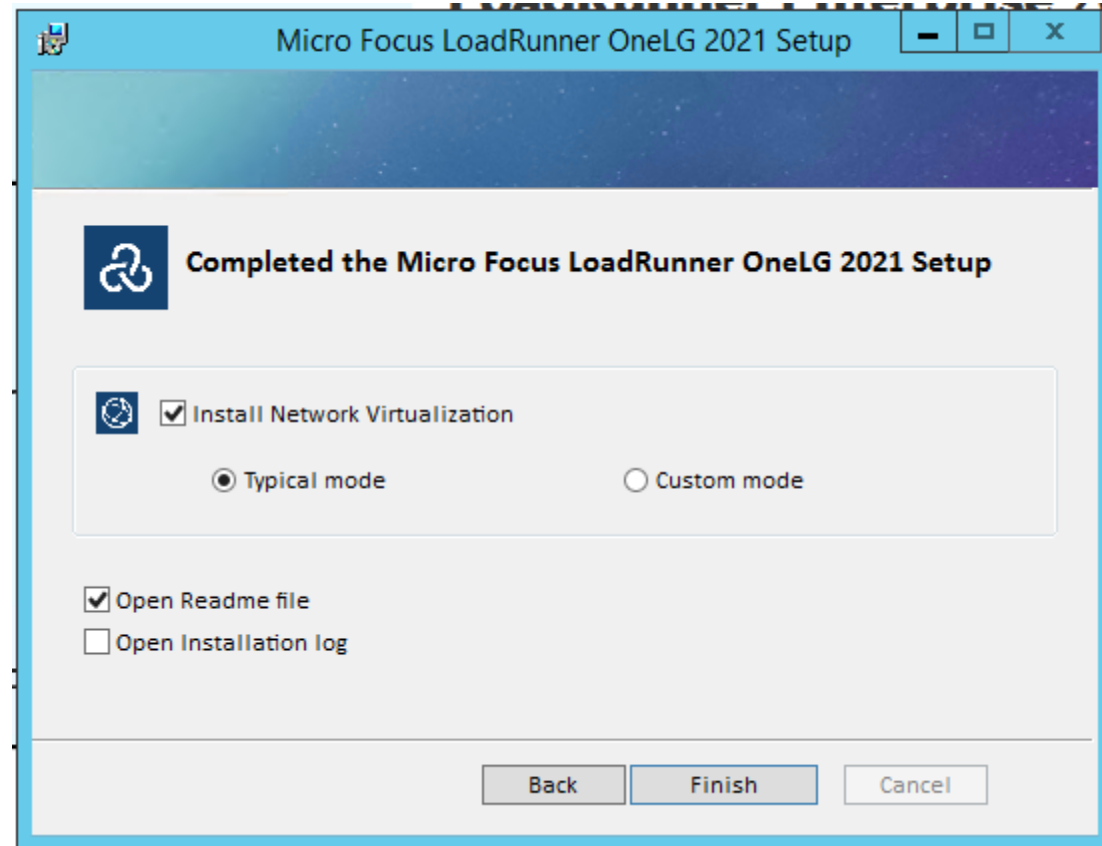
Below the "Generate a certificate automatically" option, there are three text input fields:

- "Common name:" with the text "LRCert" entered.
- "CA private key:" with an empty text box and a browse button ("...").

At the bottom of the main content area, there is a button labeled "Secure LoadRunner".

At the very bottom of the window, there are three navigation buttons: "Back", "Next", and "Cancel". The "Next" button is highlighted with a blue border.

# Configuration Wizard



# Post configuration checks

- There could be situations when the configuration process finishes but the product is not working in which case some things could be checked
  - Make sure the LoadRunner Remote Management Agent Service is installed.
  - Make sure the LoadRunner Agent Service is running
  - Check that the IUSR\_METRO account is added on the admin group.
  - If using a Service Account, make sure the Policies are met.

# Relevant files

- Logs:
  - Configuration Wizard:
    - Main log:
      - <InstallDir>\orchidtmp\Configuration\configurationWizardLog\_lts.txt (Host)
    - Auxiliary logs:
      - <InstallDir>\orchidtmp\LTLogger\HP.Software.HPX.ConfigurationWizard\log.txt
- Configuration related files:
  - <InstallDir>\dat\Setup\MSBuild\HP.PC.LTS.MSBuild.proj (Host)
    - This files contains all the tasks which are executed during the 'Configure Process' step of the Configuration Wizard.
    - Can be used for skipping certain tasks in case they are failing and the intention is to go through with the configuration regardless of these errors, not very recommended as skipping a task might cause errors at a later stage

# Adding a Host on LRE

- LoadRunner Enterprise Administration > Maintenance > Hosts > Locations

The screenshot shows the 'New Host' configuration form in the LoadRunner Enterprise Administration interface. The form is titled 'Hosts > New Host' and contains the following fields and options:

- Host Name \***: A text input field.
- Description**: A text input field.
- Purpose \***: A group of three checkboxes:  Controller,  Data Processor, and  Load Generator.
- Source \***: A dropdown menu with 'Local' selected.
- Priority \***: A dropdown menu with '5' selected.
- Status \***: A dropdown menu with 'Operational' selected.
- Location \***: A dropdown menu with 'Default' selected.
- Host Installation \***: A dropdown menu with 'Windows Host' selected.
- MI Listeners \***: A dropdown menu with 'None' selected.
- Enable SSL
- Belongs to Pools**: A searchable list containing 'General' (checked).
- Host Attributes**: A searchable list containing 'Host memory:High' (unchecked).

At the bottom right of the form, there are 'SAVE' and 'CANCEL' buttons.

# Known Issues during Test Runs.

- If you are using a GUI protocol, make sure the agent is running as a process.
- Make Sure port 54324 and 54245 are open on the Hosts.
- Ensure the Temp folder has a short path(less than 255 characters)
- Unable to Allocate Host:

Check IUSR\_METRO is added on the machine and is assign to the Admin Group.

Check no Port rules are applied on the Firewall, rules such as SSL traffic required for the communication, or in case SSL is implemented that TCP rule is should be changed to SSL.

# InfluxDB Known Issues

- Problem:

Not seeing all metrics on influx after upgrading to LR 2021 from LR 2020

- Solution:

The format of the data exported to influx was changed between versions 2020 and 2021.

Port 8086 should be open for outgoing communication from the LoadRunner Enterprise server, and for incoming communication for the LoadRunner Enterprise host

# InfluxDB Known Issues

- Problem:

If you uninstall a host and reinstall it again, and during this time the LoadRunner Enterprise system user name or password is changed, access to the internal Influx database on the host will be denied.

- Solution:

You must delete this folder in order for LoadRunner Enterprise to reconfigure the database with the new user. To avoid data loss when deleting this folder, we recommend changing the identity using the InfluxDB REST API.



# InfluxDB Known Issues

- Problem:

If you encounter an "Unable to write data" error, it is possible that the maximum limit of series per database has been reached. The default limit is 1,000,000 transactions per database.

- Solution:

1. On the Controller host, stop the LoadRunner Data Service.
2. Open the **<host installation>\bin\influxdb\influxdb.conf** file, and set `max-series-per-database=0` to make it unlimited.

# Monitors Known Issues

- Problem:

Unable to create a monitor

- Solution:

1. Make sure that the user trying to access the machine to monitor exists on this machine and has proper privileges. Usually IUSR\_METRO is the user attempting to monitor.
2. Some monitors require certain clients to reside on the Utility Server and the Controller.
3. Make sure the agent required for a particular monitor is running on the machine that you want to monitor.
4. Some monitors require access to a particular URL, from both the LoadRunner Enterprise utility server and the Controller, for monitoring purposes.

# Monitors Known Issues

## Monitor fails to retrieve measurements

1. If the user account **does not exist** on the remote server, authentication fails and the user that is being used for authentication and metrics retrieval is the one whose username and password are provided in the LoadRunner Enterprise user interface when creating the monitor
2. If the LoadRunner Enterprise system user account **exists** on the monitored server, **but is not a local admin** on the remote server the initial authentication succeeds, but retrieving the metrics from the remote server fails because the credentials provided in LoadRunner Enterprise when creating the monitor are not being used.

### Solution:

- Remove the LRE system user from the monitored machine, or
- Deny access of the LoadRunner Enterprise system user to the monitored machine from **Local security policy > User rights assignment > Deny access to this computer from the network**.

#### Edit Monitor

Monitor: Windows Resources

Server\*

User Name

Password

[Get Counters](#)

# Monitors Known Issues

## Disabling automatic host monitors

The host monitors feature automatically configures basic windows monitor data for all host machines involved in a performance test (except for Dockerized and Cloud load generators and OFW machines). This data (CPU, disk space, and memory) is available during a performance test run in the online graphs, or afterwards when collating and analyzing the results. This feature is convenient as it works with auto-matched load generators. However, in environments where the network ports are closed, this feature may cause a significant slowdown when starting a performance test run.

### Solution:

- Disable the host monitors. In the **Groups and Workload** tab, select **More > Test Options > Disable Default Monitors.**

# Recap

- Cover the Host Installation Process and Implementation on the LRE Admin site.
  - Understand Prerequisites required
  - Summarized the entries on the Host Adding UI
  - Comprehend the problems that could be generated by ports not being open, or blocked by Firewall Rules on Hosts or Monitors.
  - Understand how Graphs are displayed during test run via Known Issues.



**Thank you**